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10/676,138

09/30/2003

Scott William Pathakis

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EXAMINER

HOMAYOUNMEHR, FARID

ART UNIT

PAPER NUMBER

2439

NOTIFICATION DATE

DELIVERY MODE

11/25/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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| Office Action Summary | Application No. 10/676,138 | Applicant(s) PATHAKIS ET AL. | |
| | Examiner Farid Homayounmehr | Art Unit 2439 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/11/2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) 1-20 and 22-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20, 22-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: application, filed 9/30/2003; amendment filed 9/11/2009.
2. Claims 1-20, 22-24 are pending in the case. Claims 21 and 25-34 are cancelled by the applicant.
3. All claims have been amended.

Response to Arguments

4. Applicant argues that the new feature of the temporary assigned identity, which requires that it “is deterministically generated using combinations of memory addresses, hash values, and table index values”, is not taught by the combination of references cited in the rejection. This argument is moot in view of the new grounds of rejection outlined in the following. Applicant also argues that the feature of expiring the temporary identity after the session ends is not taught. However, Selvarajan clearly shows an embodiment where the user credentials (id) is expired at the end of a transaction session, and is no longer useful in performing transactions (see for example paragraph [0022]). Accordingly, applicant's argument is non-persuasive.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xiong (US Patent No. 7,096,490, filed March 20, 2002) in view of Gabber (US Patent No. 5,961,593, dated October 5, 1999), and further in view of Selvarajan (US Patent Application Publication No. 2002/0032649, filed April 11, 2001), and further in view of Rowland (US patent No. 6,405,318, filed March, 1999), and further in view of Uhlik et al (US Patent No. 7,197,560) hereinafter called Uhl.

6.1. As per claim 1, Xiong is directed to a method for generating temporarily assigned identity information implemented in a computer-readable medium and executed on a proxy service to perform the method, comprising: authenticating identity information associated with a request received from a requestor for accessing a service, wherein the request is sent from the requestor to the service and intercepted for processing (Xiong col. 5 line 23 to col. 6 line 27, teaches a request for authentication from the client to the ISP intercepted by a auto-configuration device 10. Device 10 negotiates the authentication protocol and user identity and password to be used for authentication that is supported by both the client and the ISP); generating temporarily assigned identity information for the requestor (Xiong teaches presenting encrypted

Art Unit: 2439

user ID and password in place of the unencrypted user ID and password for authentication. However, Xiong does not explicitly teach generation of a temporary assigned identity for the requestor. Gabber teaches generation of an alias or substitute identifier (temporary assigned identity) to replace the user ID (Gabber col. 11 lines 15-37, and abstract));

Gabber also teaches and wherein the temporary assigned identity information is used for impersonating the requestor and includes a subset of original information associated with the requestor (Gabber col. 8 lines 17-63 shows that the temporary assigned identity is used to impersonate the user, and at the mean time keeps some of the original information associated with the original request. This is because Gabber's temporary assigned identity is anonymous, but consistent. The user's private information can not be identified, yet the user is recognized and accordingly provided personalized service. Therefore, some of the user original information must be included in temporary id);

updating a protected identity directory with the temporarily assigned identity information (Gabber col. 11 line 37-53 shows that the substitute id (temporary id) is computed based on the stored data (ID, secret domain-name), which is equivalent of a directory. Note that Gabber col. 12 line 8-18 teaches that keeping a directory to translate user data to substitute data is part of prior art); and directly transmitting the request and the temporarily assigned identity information to the service on behalf of the requester (Gabber col. 11 line 36-66), wherein the service accesses the protected identity directory with the temporarily assigned identity information to authenticate the requestor for access (Gabber col. 11 lines 37-53 shows the server requests

Art Unit: 2439

authentication data from proxy site 110a (which provides the temporary assigned identity information) and receives the authentication data from the proxy), and wherein the temporarily assigned identity information syntax and semantic format recognized and expected by the service for authentication access to the service (Gabber's substitute ID is used to authenticate the user to the service, therefore, matched the syntax and semantic format of the service. Also, Xiong col. 5 line 23 to col. 6 line 27 shows that the auto-configuration device adjusts the protocol such that both the client and the ISP (service) support the authentication protocol).

Gabber and Xiong are analogous art as they are both directed to facilitating authentication between a client and a server. At the time of invention, it would have been obvious to the one skilled in art to enhance Xiong's system of auto-configuring the authentication protocol, by adding a temporary user ID to protect the identity of the user. The motivation to do so would have been to protect the identity of the user and eliminating unwanted communication as suggested by Gabber col. 1 line 20 to col. 2 line 11.

Xiong in view of Gabber does not explicitly teach the temporary assigned identity information is unique to the request and expires when the request expires or when the requestor logs out or terminates a communication session associated with the service. Gabber does teach that the temporary identity for all requests to each distinct service provider is unique (see col. 6 line 59 to col. 7 line 17), but does not generate a unique

Art Unit: 2439

ID for each and every request. Gabber also teaches keeping track of sessions between the user and service provider (see col. 14 lines 26-47), but does not teach expiring the temporary identity at the end of each session.

Selvarajan teaches a system to generate a high secure single usage e-currency-ID (see Abstract) for performing Internet based transactions using a credit card. Selvarajan teaches generation of unique ID (per use), including a preset time-out, which expires after a predetermined time (see parag. 19).

At the time of invention, it would have been obvious to the one skilled in art to modify Xiong in view of Gabber, by enhancing Gabber's system of ID generation to generate IDs unique to each request (per use), and expiring after a time-out period, as taught by system of Selvarajan. Note that Gabber teaches use of credit card for payments, while concealing the user credit card information, if an intermediate system, such as the service provider (AMERICA ONLINE) can provide its own credit card info (see Gabber col. 12 line 57, to col. 13 line 5). Therefore enhancing Gabber systems to accommodate secured credit card transactions is readily suggested by Gabber. Note that Selvarajan's system provides secure credit card payments by generating a unique temporary ID.

The motivation to combine said teachings of Selvarajan with Xiong in view of Gabber would be increasing security such that more critical transactions, such as credit card payment could be accommodated.

Xiong in view of Gabber and Selvarajan does not explicitly teach the service detecting and denying multiple login events that use the temporary assigned identity information.

Rowland is directed to an intrusion detection system that monitors activities and detects and mitigates suspect activity (see abstract). Rowland column 5 lines 10-20 teaches that when the multiple login activities using the same identity is detected, it is a sign of suspect activity and access is denied.

Rowland and Xiong in view of Gabber and Selvarajan are analogous art as they are directed to information security systems and access control enforcement. At the time of invention, it would have been obvious to the one skilled in art to combine the teachings of Rowland, and particularly the intrusion detection mechanism that detects and disables multiple logins using the same credentials, with the system of Xiong in view of Gabber and Selvarajan. The motivation to do so would have been to further secure the system by mitigating intrusion attempts.

The combination of references above does not explicitly teach the feature of deterministically generating the temporary id using combinations of memory addresses, hash values, and table index values. Uhl is directed to generation of the deterministic element of an identifier by combining several factors associated with the user, its connection (MAC address), the device the user is using, etc. It also teaches using a

Art Unit: 2439

hash function to generate a hash value (see for example col. 9 line 44 to col. 10 line 45). Therefore, Uhl teaches deterministically generating an identifier using a combination of elements including an address and hash values. Uhl's cited portion also teaches that the generation may be based on application specifics. Therefore, barring any unexpected results, it would have been obvious to deterministically generate an identifier using any combination, including memory addresses, hash values and table index values. It is noteworthy that claim requires combinations of several values. It is not directly limited to include all the values.

Uhl is directed to establishment of secure connections and authentication services, and as such is analogous to the combination art of Rowland, Xiong, Gabber and Selvarajan.

Therefore, it would have been obvious to use the techniques taught by Uhl in generation of the temporary identity of the combination of Rowland, Xiong, Gabber and Selvarajan.

6.2. As per claim 2, Xiong in view of Gabber, Selvarajan and Rowland is directed the method of claim 1 further comprising: generating a mapping between the identity information and the temporarily assigned identity information; and storing the mapping

Art Unit: 2439

in a local identity mapping store (Gabber col. 12 lines 7-17 teaches that storing the mapping data is in the prior art. Fig. 5 and associated text shows an alternative embodiment, including a local proxy server, which provides mapping data locally. Also see col. 7 lines 25 to 40, teaching storage of identity information in a database or alias table).

7. Claims 3-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xiong (US Patent No. 7,096,490, filed March 20, 2002) and view of Gabber (US Patent No. 5,961,593, dated October 5, 1999), and further in view of Selvarajan (US Patent Application Publication No. 2002/032649, filed April 11, 2001), and further in view of Rowland and further in view of Gupta (US Patent No. 6,868,448, filed March 12, 1999) and Uhl.

7.1. As per claim 3, Xiong in view of Gabber, and further in view of Selvarajan is directed to the method of claim 2 further comprising, synchronizing the local identity mapping store and the mapping with one or more addition local identity mapping stores (Gabber teaches storing the identity information in local or central directories.

Synchronizing the local identity mapping store and the mapping with one or more addition local identity mapping stores was a well known attribute of distributed directory services systems at the time of invention. However, Gabber does not explicitly discuss the mentioned attribute.

Art Unit: 2439

Gupta teaches a Directory Service (col. 16 line 42 to col. 17 line 14), which replicates data (entries) in several directory services distributed in different geographical areas. Gupta also teaches local application servers, which perform authentication and store the related identity information (col. 7 lines 12 to 25). The identity information stored at the local servers is automatically updated when the information at the remote server is updated. Therefore, Gupta teaches synchronizing the local identity mapping store and the mapping with one or more addition local identity mapping stores.

Gupta and Gabber are analogous art, as they are both related to locating and providing data, resources and services to users in a distributed network. At the time of invention, it would have been obvious to a person skilled in art to deploy the distributed directory service taught by Gupta in the system of Xiong in view of Gabber and Selvarajan to allow access to user authentication data in a distributed network. One motivation to do so would have been balancing the load of directory servers as suggested in Gupta col. 18, line 3 to 47.

7.2. As per claim 4, Xiong in view of Gabber, further in view of Selvarajan, and further in view of Gupta is directed to the method of claim 1 wherein the generating further includes assembling an aggregate identity configuration for the requestor from one or more authoritative identity stores before generating the temporarily assigned identity information (Gabber col. 7 line 1 to col. 9 line 65 shows that the substitute ID is generated from a universal user ID and password combined with site specific data.

Art Unit: 2439

Therefore, Gabber stores a universal secret from an authoritative store before generating substitute IDs).

7.3. As per claim 5, Xiong in view of Gabber, further in view of Selvarajan, and further in view of Gupta is directed to the method of claim 1 further comprising, removing the temporarily assigned identity information from the protected identity directory after detecting a terminating event that terminates the authenticity of the temporarily assigned identity information (Gupta col. 7 lines 12 to 25).

7.4. As per claim 6, Xiong in view of Gabber, further in view of Selvarajan, and further in view of Gupta is directed to the method of claim 5 further comprising recycling a storage space occupied by the temporarily assigned identity information for use in a subsequent iteration of the method (re-use of the space previously occupied by deleted data is standard practice in computer systems).

7.5. As per claims 7-9, Xiong in view of Gabber, further in view of Selvarajan, and further in view of Gupta is directed to the method of claim 1 further comprising: detecting dynamic changes made on at least a portion of the identity information, wherein the changes are detected within the protected identity directory; and synchronizing the temporarily assigned identity information and other local identity stores with the changes and logging the changes (see response to claim 3. It is well

Art Unit: 2439

known in distributed directory systems to detect a change, update the information in the main and other local directory services and log the event).

8. Claims 10-20, 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xiong (US Patent No. 7,096,490, filed March 20, 2002) and view of Gabber (US Patent No. 5,961,593, dated October 5, 1999), and further in view of Selvarajan (US Patent Application Publication No. 2002/032649, filed April 11, 2001), and further in view of Rowland and further in view of Gupta (US Patent No. 6,868,448, filed March 12, 1999), and Uhl and further in view of Examiner Official Notice.

8.1. Claim 10 requires removing the mapping between the identity configuration and temporary assigned identity when the request expires. As shown in rejection of claim 5 above, removal of information associated with a session after the session is terminated is made obvious by Gupta's teaching in col. 7 lines 12 to 25. Therefore it would have been obvious to remove the mappings associated with the session, when the session is terminated.

8.2. Claim 17 requires the identity information to include a combination of an identification, a password, a certificate, a token, a biometric value, a hardware value, a network connection value, and a time value. Gabber col. 6 lines 59-67 show the identity information includes a password and a user name (an identity). Creation of an identity from a combination of elements was well-known in the art. Therefore, it would have

Art Unit: 2439

been obvious to create an identity from a combination of a password and a user name, or other elements and attributes related to a user. The motivation would have been to make it more difficult to guess the identity. As support for Official Notice that creation of an identity from a combination of elements was well-known in the art see Uhl's teachings cited in rejection of claim 1.

8.3. Limitations of claim 18 are substantially the same as claims 17 and 3.

8.4. Claim 23 requires temporarily assigned identity information is randomly or deterministically generated. Per Gabber col. 7 lines 1-2, the character string used to generate the substitute ID is chosen randomly.

8.5. Limitations of claims 11-16, 19, 20, 22, and 24 are substantially the same as claims 1-10, 17, and 18 above.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farid Homayounmehr whose telephone number is (571) 272-3739. The examiner can be normally reached on 9 hrs Mon-Fri, off Monday biweekly.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7874. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

Art Unit: 2439

have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Farid Homayounmehr

11/20/2009

/Edan Orgad/
Supervisory Patent Examiner, Art Unit 2439